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**Neuroglobin expression in neurogenesis.**

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**Public Summary:**

Neuroglobin is a hypoxia-inducible, neuroprotective protein related to myoglobin and hemoglobin, but little is known about its neurodevelopmental expression or function. To begin to explore these issues, we measured neuroglobin protein expression during neuronal differentiation of human embryonic stem cells in vitro and in the neurogenic subventricular zone of adult rats in vivo. Neuroglobin protein expression was barely detectable by western blotting in human embryonic stem cells, but was readily demonstrable in neural stem cells, and was further induced upon differentiation to neurons. In the adult subventricular zone, neuroglobin expression coincided with that of the neuronal lineage marker doublecortin, but not with vimentin or glial fibrillary acidic protein. These findings suggest that neuroglobin is expressed early in the course of neuronal differentiation and may, therefore, have a role in neurodevelopment.

**Scientific Abstract:**

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